REMARKS

Claims 1 - 12 are pending. Claims 1, 2, and 4- 5 have been amended. Claims

6 - 12 has been added. No new matter has been added. Reexamination and

reconsideration of this application are respectfully requested.

In the April 12, 2005 Office Action, the Examiner stated that Figure 6 should be

designated by a legend such as --Prior Art--. A corrected drawing is being submitted

which designates Figure 6 as --Prior Art-- and is labeled as a Replacement Sheet.

In the April 12, 2005 Office Action, the Examiner rejected claims 1 - 5 under 35

U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,970,208 to Shim ("the

Shim reference") in view of U.S. Patent No. 5,802,026 to Tsukihashi ("the Tsukihashi

reference"). This rejection is respectfully traversed in so far as it is applicable to the

presently pending claims.

Independent claim 1, as amended, distinguishes over the cited references.

Claim 1, as amended, recites:

> An audio data recording medium reproducer comprising:
> **a medium reader for reading-out digital audio data at a speed faster than the audio data reproducing rate** from a medium into which the data has been recorded;
> a first buffer memory for buffering the digital audio data read by the medium reader;
> **a first controller for controlling the medium reader and controlling reading and writing of the first buffer memory;**
> a second buffer memory for buffering the digital audio data transferred from the first buffer memory;
> a DA converter which receives the digital audio data from the second buffer memory and converts the digital audio data into analog audio signals; and
> a second controller for controlling reading and writing of the second buffer memory, **wherein**
> **the first controller and the second controller are connected via an interface.**

The Shin reference does not disclose, teach, or suggest the audio data recording medium reproducer of claim 1, as amended. The Examiner states that the Shin reference discloses, in Figs. 1 and 2, a medium reader, a first buffer memory (330), a first controller (503), a second buffer memory (260), a D/A converter (800), and a second controller (506), wherein the first controller and second controller are connected via an interface (an arrow from element 503 to 506 labeled TRANSFER). *(Office Action, pages 2 and 3).*

Specifically, the Shin reference discloses that a disk driver controller 500 controls a linear velocity of the disk revolution and other disk operations according to a frame synchronous signal Sf. A first memory 330 is used for error correction and a second memory 280 is used as a variable bit rate buffer or data buffer. A system decoder 200 demodulates the data and stores this data in the first memory 330. The data is read out to the system decoder 200 by a block unit to correct errors and then stored again in the first memory 330. The system decoder 200 then descrambles the data and stores the descrambled data in the second memory 280. The descrambled data is again read out from the second memory 280 and supplied to a de-multiplexer which provides either an audio decoder or a video decoder. A microcomputer controls the overall operation of the optical disk recording system. The audio and video data demodulated respectively at the audio decoder 630 and the video decoder 620 are provided to a speaker and a monitor. *(Shin, col. 1, lines 37 - 66).*

Fig. 2 illustrates a detailed diagram of a section of the system decoder 200 of the Shin reference. The first memory 330 is an error correction memory, including a transfer region to transfer the error corrected data to the second memory 280. The

second memory 280 includes a region for buffering the error corrected data and another region for transferring data in accordance with a request from the audio and video decoders 620 and 630 or ROM decoder 950. *(Shin, col. 2, line 11 - 22).* The error correction circuit memory controller 503 controls an access to the first memory 330 in order to correct errors with respect to the demodulated data. *(Shin, col. 2, lines 52 - 54).* The VBR memory controller 506 controls an access to the second memory 280 in order to VBR-buffer the error corrected data. The VBR memory controller allows the second memory to buffer the descrambled DVD data and transfers the buffered data to the audio and video decoders 620 and 630. *(Shin, col. 3, lines 6 - 12.)*

This is not the same as an audio data recording medium reproducer including **a medium reader for reading-out digital audio data at a speed faster than the audio data reproducing rate** from a medium into which the data has been recorded, a first buffer memory for buffering the digital audio data read by the medium reader; and **a first controller for controlling the medium reader and controlling reading and writing of the first buffer memory.** The Examiner notes that the Shin reference does not disclose a medium reader for reading-out audio data **at a speed faster than the audio reproducing rate.** The applicants agree with the Examiner.

The Shin reference discloses a controller (ECC Memory Controller 503) for reading and writing of a first memory (380). However, the Shin reference first controller does not **control the medium reader,** as is recited in claim 1. In contrast, in the Shin reference, the combination of the microcomputer 500 and disk drive controller 400 control the medium reader. In other words, in the Shin reference, a separate controller, not the one controlling reading and writing of the first memory, is controlling the medium

(OD) reader. Accordingly, applicants respectfully submit that claim 1, as amended, distinguishes over the Shin reference.

If the Examiner asserts that the combination of or either the disk drive controller 400 or the microcomputer 500 (in the Shin reference) is the first controller, then the first controller (e.g., disk drive controller) does not **control reading and writing of the first buffer memory,** as is recited in claim 1, as amended. Further, if either one of the disk drive controller 400 or microcomputer 500 is the first controller, then the first controller and the second controller are not connected by an interface. This is in contrast to claim 1, as amended, wherein **the first controller and second controller are connected via an interface.** Accordingly, claim 1, as amended, distinguishes over the Shin reference.

The Tsukihashi reference does not make up for the deficiencies of the Shin reference. The Examiner states that the Tsukihashi reference discloses a medium reader which has an increased data transfer rate from which the optical medium was recorded at. *(Office Action, page 3).* The applicants understand the Examiner's statement, but claim 1, as amended, recites **a medium reader for reading-out digital audio data at a speed faster than the audio data reproducing rate,** and a data transfer rate from the optical medium (as is disclosed in the Tsukihashi reference) is not the same thing as an audio data reproducing rate. The audio data reproducing rate is the rate at which a device replays audio data. Accordingly, the Tsukihashi reference does not disclose the highlighted limitation. Further, the Tsukihashi reference does not disclose an audio data recording medium reproducer including a medium reader for reading-out digital audio data at a speed faster than the audio data reproducing rate

from a medium into which the data has been recorded, a first buffer memory for

buffering the digital audio data read by the medium reader, a first controller for

controlling the medium reader and controlling reading and writing of the first buffer

memory, a second buffer memory for buffering the digital audio data transferred from

the first buffer memory, a D/A converter which receives the digital audio data from the

second buffer memory and converts the digital audio data into analog audio signals,

and a second controller for controlling reading and writing of the second buffer memory,

wherein the first controller and second controller are connected via an interface.

Accordingly, claim 1, as amended, distinguishes over the Tsukihashi / Shin reference

combination.

Independent claim 5 recites limitations similar to claim 1, as amended.

Accordingly, applicants respectfully submit that claim 5 distinguishes over the

Tsukihashi / Shin reference for reasons similar to those discussed above in regard to

claim 1.

Claims 2 - 4 and 6 - 12 depend, indirectly or directly, on claims 1 and 5.

Accordingly, claims 2 - 4 and 6 - 12 distinguish over the Shin / Tsukihashi reference for

the same reasons as those discussed above in regard to claim 5.

Claim 2 further distinguishes over the cited references. Claim 2 recites:

> The audio data recording medium reproducer according to Claim 1,
> wherein the medium reader, the first buffer memory, and the first
> controller are constructed as a single unit, and **wherein the second
> buffer memory, the D/A converter, and the second controller are
> constructed as a single unit**.

The Shin reference does not disclose, teach, or suggest an audio data recording

medium reproducer including two single units. Assuming, *arguendo*, that the Shin

reference does disclose a first buffer memory, a first controller, a second buffer memory, a D/A converter, and a second controller, the Shin reference discloses that all of the components are constructed in a single unit, which is in contrast to having **the second buffer memory, the D/A converter, and the second controller being constructed as a single unit**, as is recited in claim 2, as amended. According, claim 2 distinguishes over the Shin reference.

The Tsukihashi reference does not make up for the deficiencies of the Shin reference. The Tshukihashi refererence does not disclose a first memory, a first controller, a second memory, a D/A converter, and a second controller, wherein **the second buffer memory, the D/A converter, and the second controller are constructed as a single unit.** Accordingly, claim 2 further distinguishes over the Tsukihashi / Shin reference combination.

Claim 11 further distinguishes over the cited references. Claim 11 recites:

> The audio data recording medium reproducer according to claim 5, **wherein said second controller monitors a remaining data amount in the second buffer memory, and when the remaining data amount becomes small, reads the digital audio data from the first buffer memory and writes the digital audio data into the second buffer memory.**

There is no disclosure in either the Shin or the Tsukihashi reference that the second controller monitors a remaining amount in the second buffer memory and when the remaining data amount is small, reads the digital audio data from the first buffer memory into the second buffer memory. The references do not disclose that the second controller monitors a level or remaining amount of the buffer. Accordingly, claim 11 further distinguishes over the Shin / Tsukihashi reference combination.

Claim 8 recites limitations similar to claim 11. Accordingly, claim 8 distinguishes over the Shin / Tsukihashi reference combination for reasons similar to those discussed above in regard to claim 11.

Claim 12 further distinguishes over the cited references. Claim 12 recites:

> The audio data recording medium reproducer according to claim 5, wherein **said first buffer memory has a larger capacity than the second buffer memory**.

The Shin reference does not disclose the audio data recording medium reproducer of claim 12. The second buffer in the Shin reference is disclosed to have a larger capacity than the Shin reference's first buffer, i.e., second buffer is 4 MB of RAM and first memory 128 KB RAM. Accordingly, claim 12 distinguishes over the Shin reference. The Tsukihashi reference does not disclose a first buffer memory having a higher capacity than the second buffer memory. Accordingly, claim 12 distinguishes over the Tsukihashi / Shin reference combination.

Claim 9 recites limitations similar to claim 12. Accordingly, claim 9 further distinguishes over the Shin / Tsukihashi reference for reasons similar to those discussed above in regard to claim 12.

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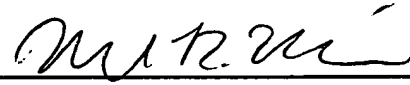
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Applicants believe that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.
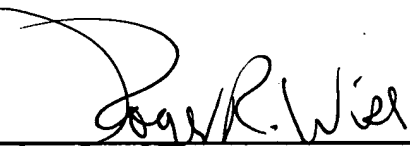
Respectfully submitted,

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<u>IN THE DRAWINGS</u>

Please replace Fig. 6 with the enclosed replacement drawing.

Red-Lined Version

FIG.6

PRIOR ART